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EXAMINER

PARVINI, PEGAH

ART UNIT

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1793

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/582,495 | <b>Applicant(s)</b><br>ENTENMANN ET AL. |  |
|                              | <b>Examiner</b><br>Pegah Parvini     | <b>Art Unit</b><br>1793                 |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 June 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/527,980. Although the conflicting claims are not identical, they are not patentably distinct from each other because the copending Application, in claim 1, claims surface-modified pigments based on flake-form substrates, such as holographic pigments, pearlescent pigments, interference pigments, multilayered pigments, metal-effect pigments, goniochromatic pigments and BiOCl pigments, which are sheathed/encased with one or more layers of immobilized LCST and/or UCST. The

instant application claims same structure and type of pigment in claims 1 and 8 (dependent upon claim 1) wherein the applicants claim substrates which have been surface-modified.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### ***Claim Objections***

3. Claim 5 is objected to because of the following informalities: There is an extra space between “ha” and “ve” in the word “have” in “Substrates which ha ve been surface modified...”. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 13 provides for the use of substrate which has been surface modified, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 13 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper

definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent Application Publication No. 2004/0253444 to Schauer et al.

The applied reference has a common inventor with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1 and 4, Schauer et al. disclose protecting surfaces from corrosive attack by causing substrate to be brought into contact with polymers such as UCST polymers such as polystyrenes, polyethylene oxides and more (Abstract; [0006], [0009], [0016], [0041]). The reference, further, teaches the immobilization of said UCST polymer layer, after it's being deposited, to particularly secure coatings ([0026]).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 8-11, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,176,918 to Glausch et al. in view of WO 01/60926 to Schauer et al. which is a continuation in part of WO 01/60926 to Schauer et al.

Since the WO documents is in German, the equivalent English translation of it, US Patent Application Publication No. 2003/0012954, is used for references made to relevant paragraphs.

10. Regarding claim 1, Glausch et.al. disclose modified pearl luster pigment for waterborn coating systems, based on a platelet-form substrate coated with metal oxides

such as titanium oxide, cerium oxide and more wherein further contains a water-based oligomeric silane system (Abstract; column 1, lines 60-67; columns 2-3).

Glausch et al. do not disclose encasing said pigment with LCST or UCST polymers.

Schauer et al. disclose treating/coating particles with LCST polymers in which LCST is dissolved in a solvent at a temperature below the LCST, then mixed with the resulting solution and finally the temperature is raised to beyond the point at which LCST polymer deposits onto the particle surfaces (Abstract; [0007]). Furthermore, the reference discloses titanium dioxide, iron oxide, carbon black and more as some examples of particles used in said invention ([0010]). Schauer et al. disclose that the LCST coating completely envelops the (pigment) particles ([0014]); in addition, the reference discloses pigments as one suitable substrate ([0027]). Moreover, Schauer et al. expressly disclose that the particle surface is modified with applying LCST polymer ([0039]). Additionally, Schauer et al. disclose that subsequently to or during formation of the coating the LCST polymer is rendered immobile on the surface of the substrate to be coated therewith ([0017]).

At the time of the invention, it would have been obvious to modify Glausch et al. in order to include the LCST polymer coating as that taught by Schauer et al. motivated by the fact that Schauer et al. teach that coating with LCST polymer helps stabilize the dispersion of particles in the liquid media such as varnishes; also motivated by the fact LCST polymer coating does not influence the color of the particles themselves and that

coating with LCST polymers inhibits agglomeration of the fine pigment particles (Schauer et al. Abstract; [0008], [0009]).

Thus, it would have been obvious to combine Glausch et al. with Schauer et al. to obtain the invention as that claimed in claim 1.

11. Regarding claim 2, Schauer et al. disclose that the thickness of LCST polymer coating is preferably greater or equal to 20 nm ([0015]).

12. Regarding claim 3, Schauer et al. disclose polyethylene oxide (PEO) derivatives, polypropylene oxide (PPO) derivative and many more as some suitable LCST polymers ([0040]-[0046]).

13. Regarding claims 8 and 9, Glausch et al. disclose that the substrates used are pigments which consist of platelet-form material, for example, mica, glass and one or more metal oxide layers (such as titanium dioxide, iron (III) oxide, chromium oxide, and more) deposited thereon (column 4, lines 32-40).

14. Regarding claim 10, Schauer et al. disclose copper (ii) phthalocyanine blue pigment particles as an example of pigment particles used which is coated with LCST polymers ([0067], [0070]).



15. Regarding claim 11, Schauer et al. disclose a process of forming LCST polymer coatings over substrates which may be pigment particles dispersed in a solvent medium; the reference, further, disclose immobilizing the LCST polymer on the surface of the substrate ([0007]-[0010], [0017]-[0019], [0025], [0036], Examples 1-3).

16. Regarding claims 12 and 14, Schauer et al. disclose the existence of UV stabilizers, chromophores or luminescent components in the LCST coatings ([0027]). Furthermore, the reference discloses that the pigments coated in the disclosed manner, with LCST polymers, produce binder-free pigment pastes containing a carrier medium, water or organic solvent and more which are used in paints and varnishes ([0036]).

17. Claims 1, and 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,176,918 to Glausch et al. in view of US Patent No. 5,563,242 to Winter et al.

18. Regarding claims 1 and 4-5, Glausch et al. disclose modified pearl luster pigment for waterborn coating systems, based on a platelet-form substrate coated with metal oxides such as titanium oxide, cerium oxide and more wherein further contains a water-based oligomeric silane system (Abstract; column 1, lines 60-67; columns 2-3).

Glausch et al. do not disclose encasing said pigment with LCST or UCST polymers.

Winter et al. disclose a polymer film composition which comprises an electro coat pigment in adhesion to a metal substrate, a base or color coat that is in adhesion to the electrocoat and which comprises a film forming binder and an organic pigment or an inorganic pigment or mixture thereof, a clear coat that is in adhesion to the base coat and which comprises a film forming binder and finally, an effective amount of the film forming binder (column 4, lines 46-55). The reference, further, teaches the use of polystyrene, copolymers of styrene or methylstyrene, or polymers of monoolefins and diolefins as some examples of polymers which can be stabilized (column 6, lines 11-14, 28-32, 47-67). Additionally, the reference discloses the use of polysiloxanes such as hydrophilic polysiloxanes (column 8, lines 28-32).

It would have been obvious to combined Glausch et al. and Winter et al. to obtain the invention as claimed in claims 4 and 5 motivated by the fact that Glausch et al. discloses novel pigments for pigmenting coating materials, printing inks, etc. and that the two references have common components (Winter et al., in other words, teach a base or color coat comprising binder and a an organic pigment or inorganic pigment or mixture thereof and a clear coat adhering to the base coat in column 4, lines 46-51). Therefore, it would have been obvious to modify Winter et al. in order to incorporate therein the pigments disclosed by Glausch et al.

19. Regarding claims 6 and 7, Winter et al. disclose that the polymer composition contain from about 0.01 to about 5%, preferably from about 0.025 to about 2% and that

various conventional additives are also added to the composition such as carbon black and plasticizers (column 9, lines 32-37; column 12, lines 54-60).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegah Parvini whose telephone number is 571-272-2639. The examiner can normally be reached on Monday to Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP



**J. A. LORENGO**  
**SUPERVISORY PATENT EXAMINER**